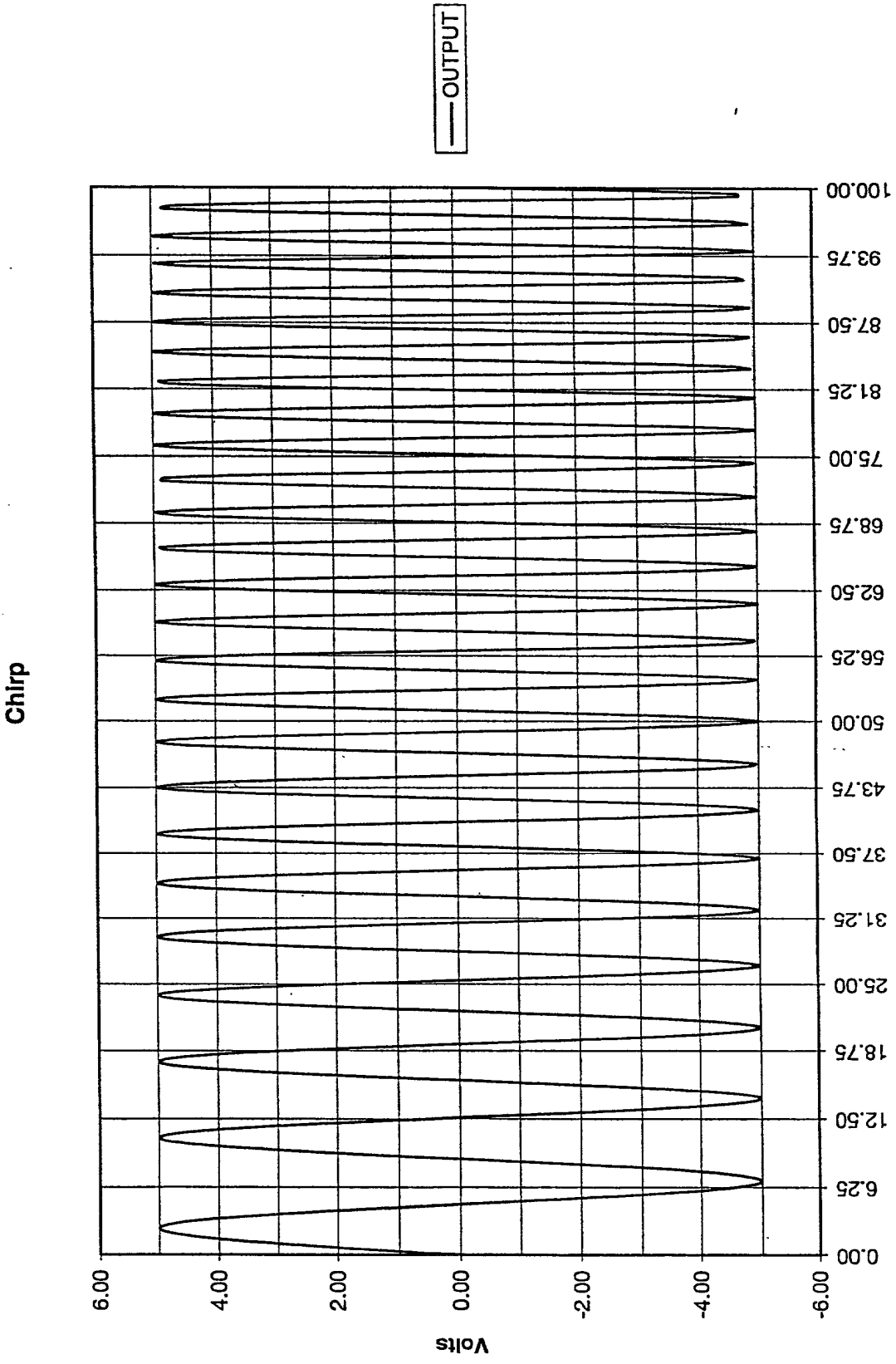

OUTPUT
Chirp
Volts
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
Time - µsec
0.00
6.25
12.50
18.75
25.00
31.25
37.50
43.75
50.00
56.25
62.50
68.75
75.00
81.25
87.50
93.75
100.00

Figure 1

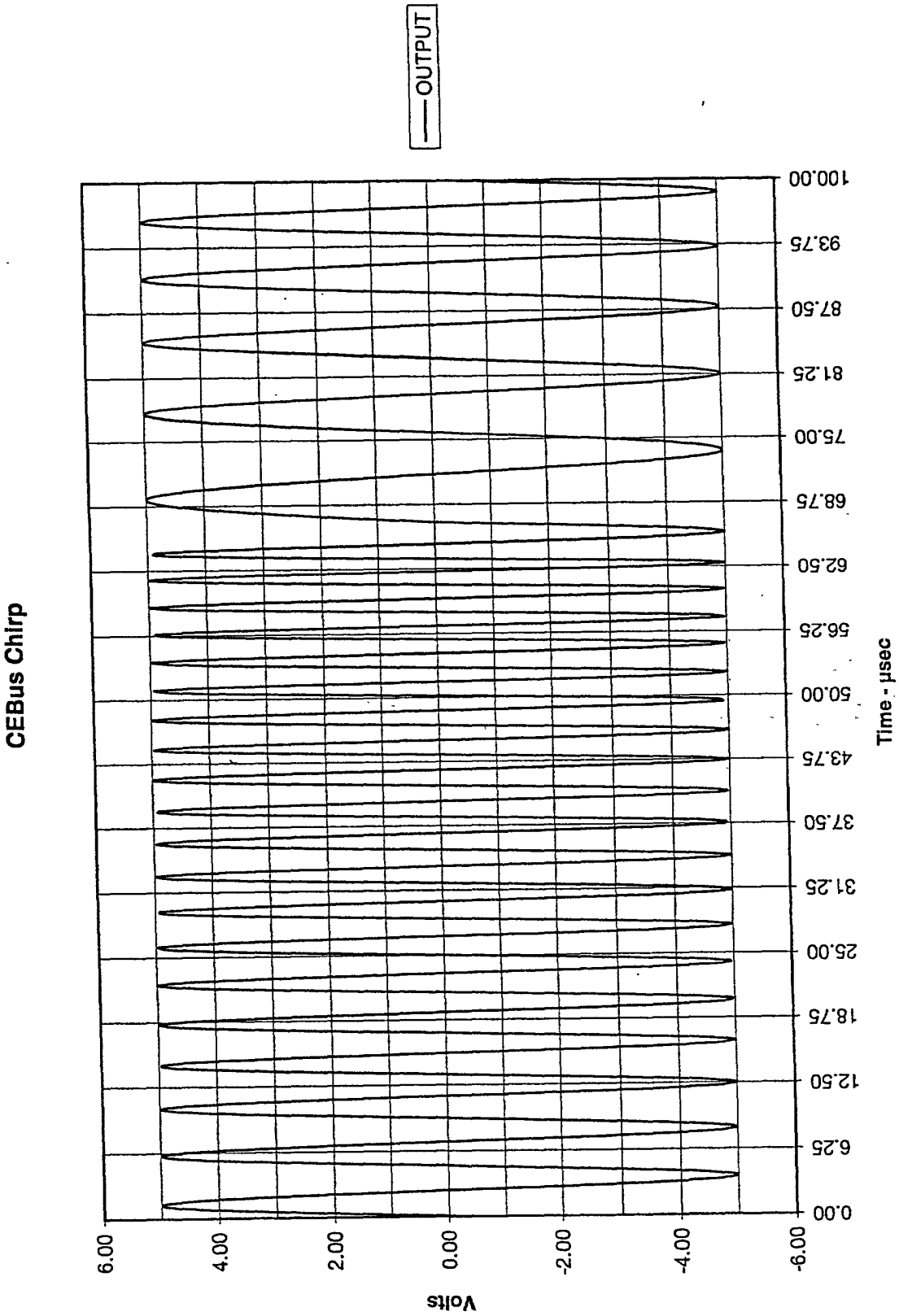

OUTPUT
CEBus Chirp
Volts
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
Time - µsec
0.00
6.25
12.50
18.75
25.00
31.25
37.50
43.75
50.00
56.25
62.50
68.75
75.00
81.25
87.50
93.75
100.00

Figure 2

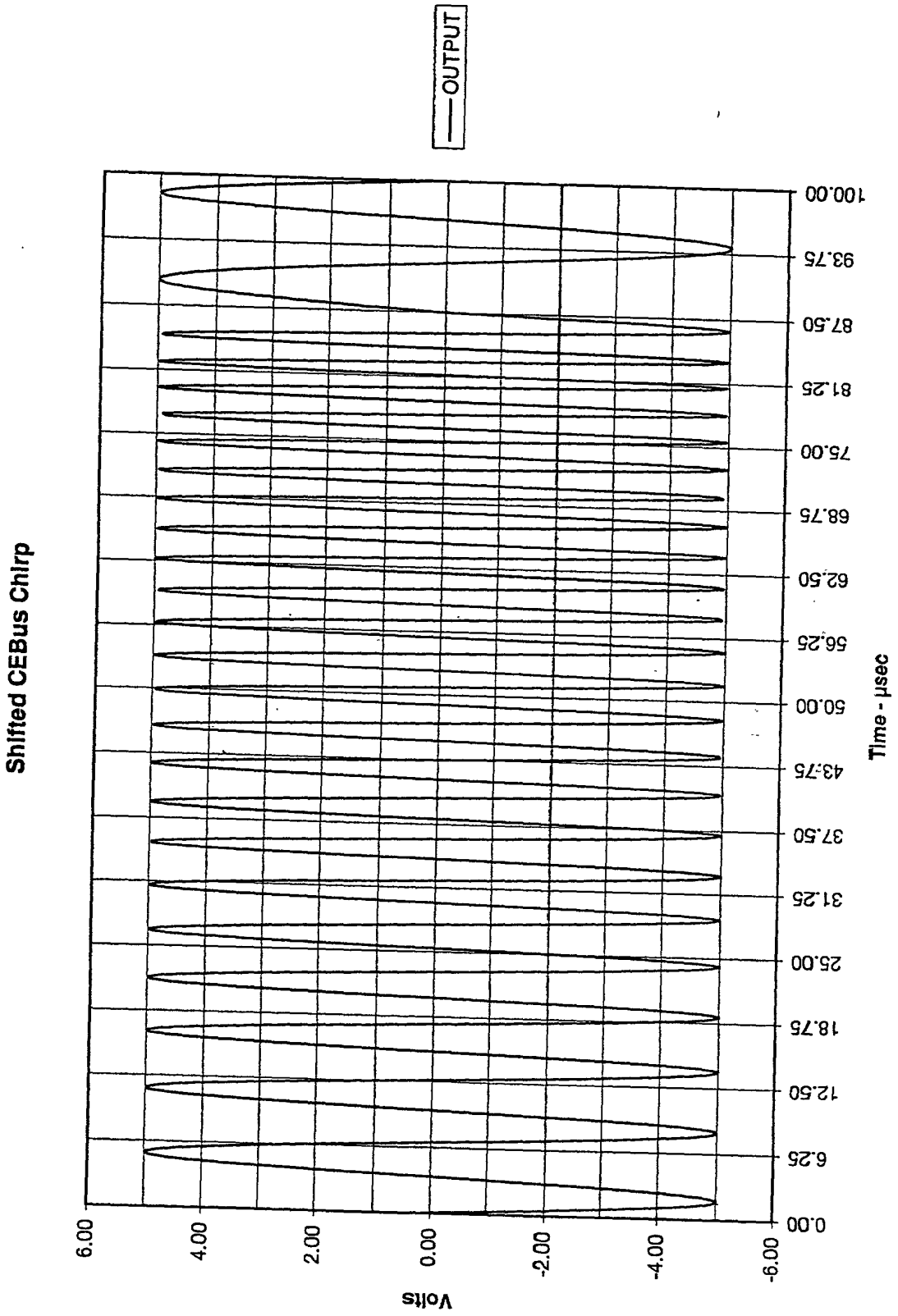

OUTPUT
Shifted CEBus Chirp
Volts
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
Time - µsec
0.00
6.25
12.50
18.75
25.00
31.25
37.50
43.75
50.00
56.25
62.50
68.75
75.00
81.25
87.50
93.75
100.00

Figure 3

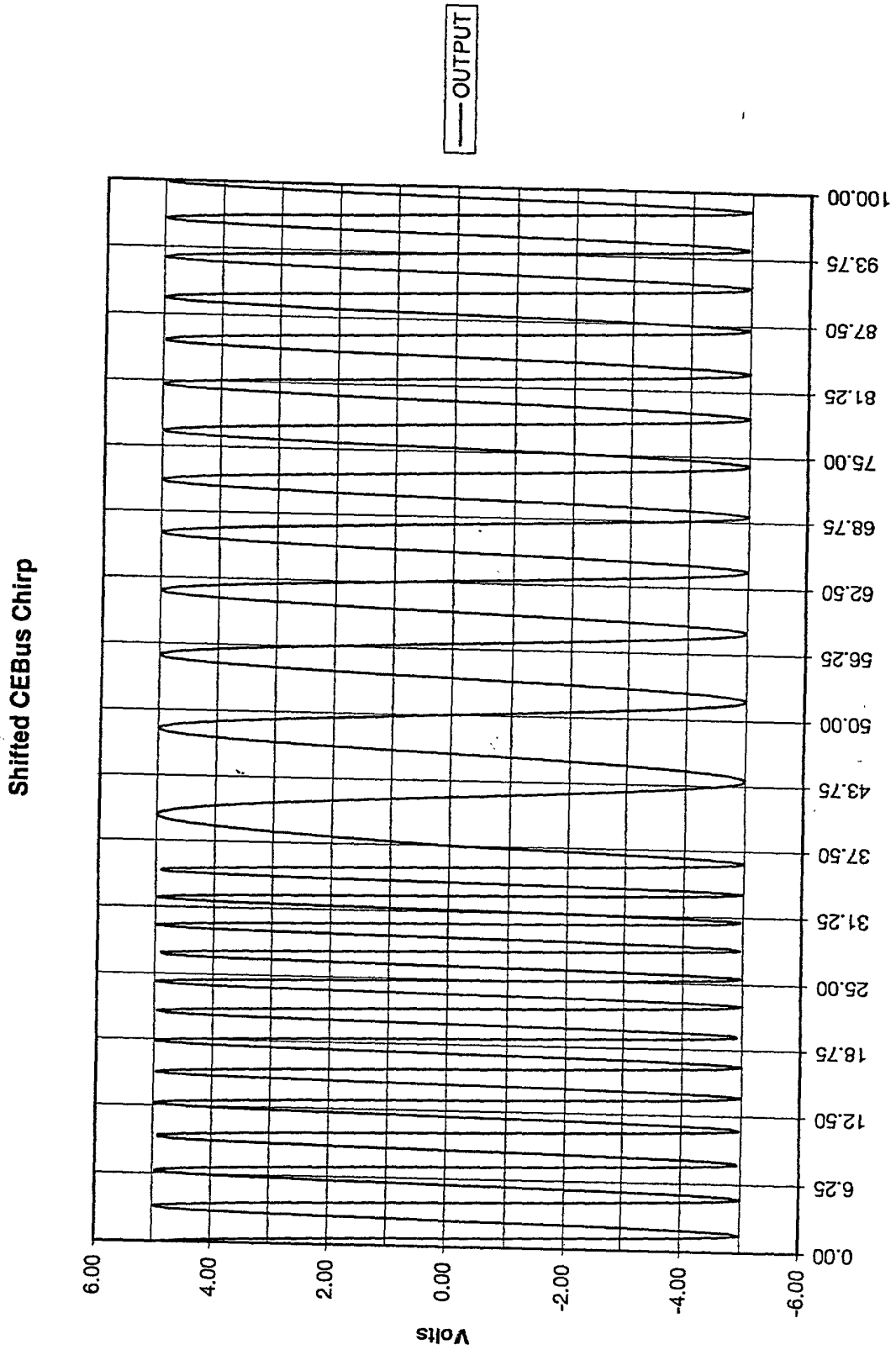

OUTPUT
Shifted CEBus Chirp
Volts
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
Time - µsec
0.00
6.25
12.50
18.75
25.00
31.25
37.50
43.75
50.00
56.25
62.50
68.75
75.00
81.25
87.50
93.75
100.00

Figure 4

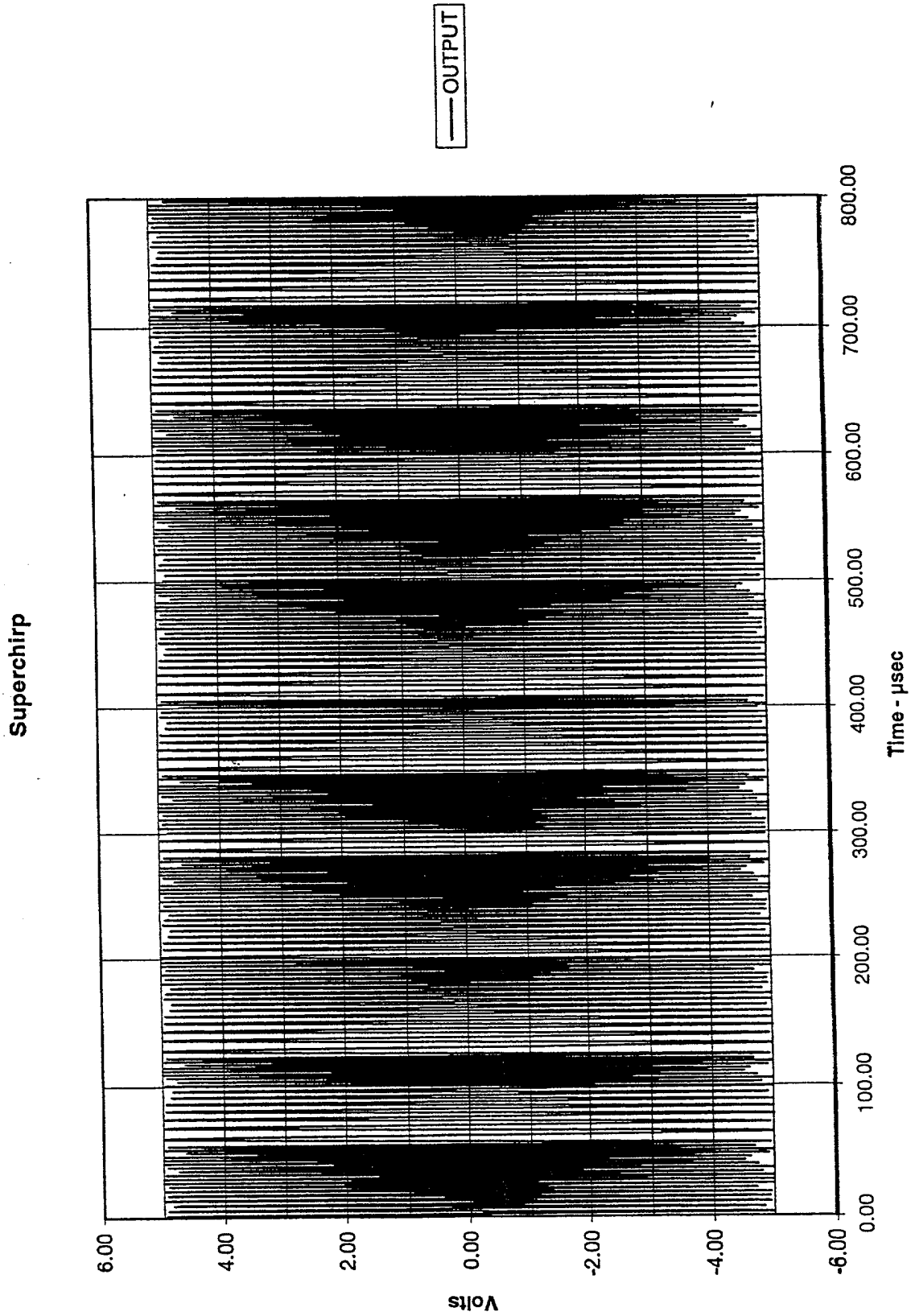

OUTPUT
Superchirp
Volts
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
0.00
100.00
200.00
300.00
400.00
500.00
600.00
700.00
800.00
Time - µsec

Figure 5

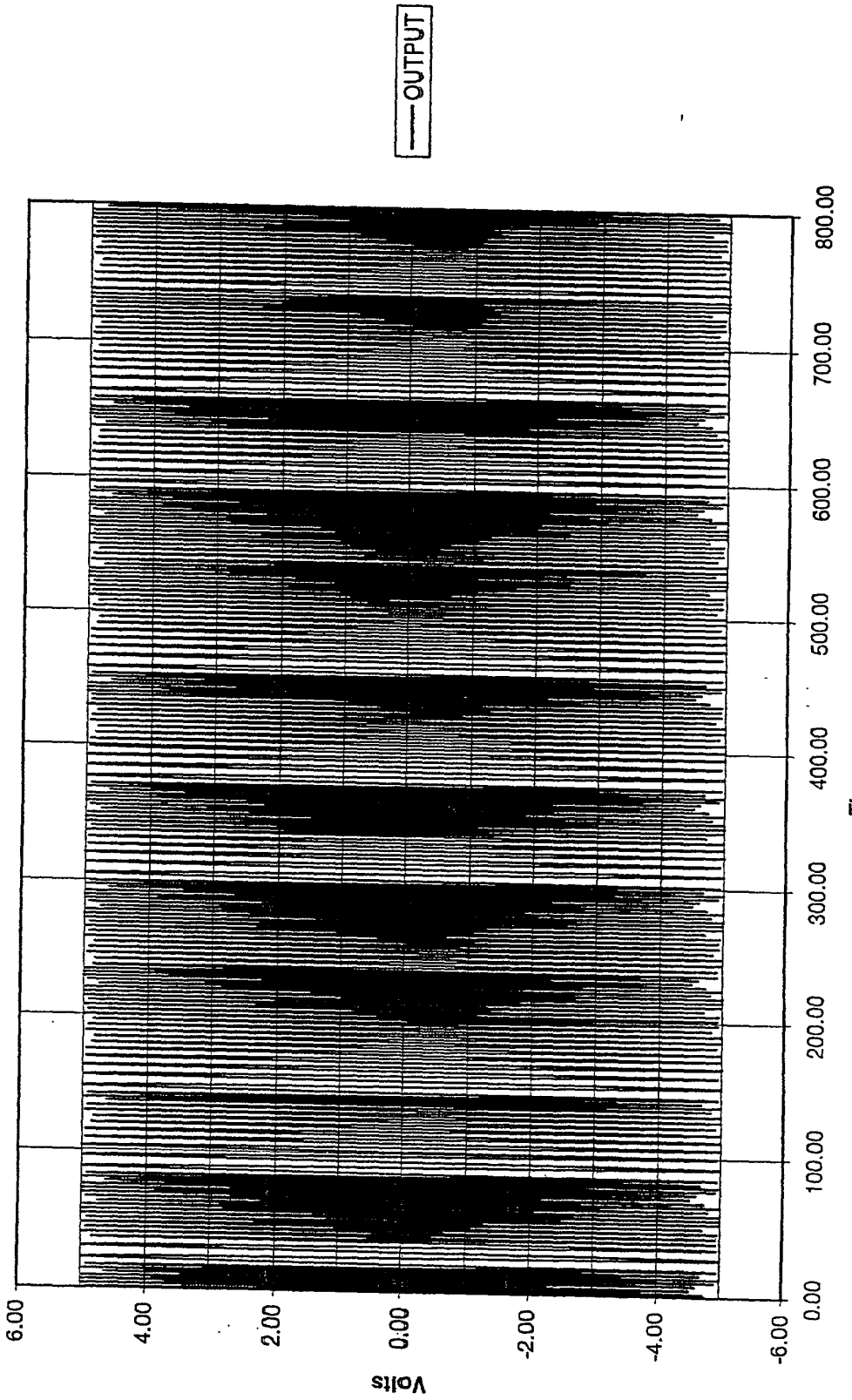

OUTPUT
Shifted Superchirp
Volts
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
0.00
100.00
200.00
300.00
400.00
500.00
600.00
700.00
800.00
Time - µsec

Figure 6

OUTPUT
Shifted Superchirp
Volts
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
0.00
100.00
200.00
300.00
400.00
500.00
600.00
700.00
800.00
Time - µsec

Figure 7

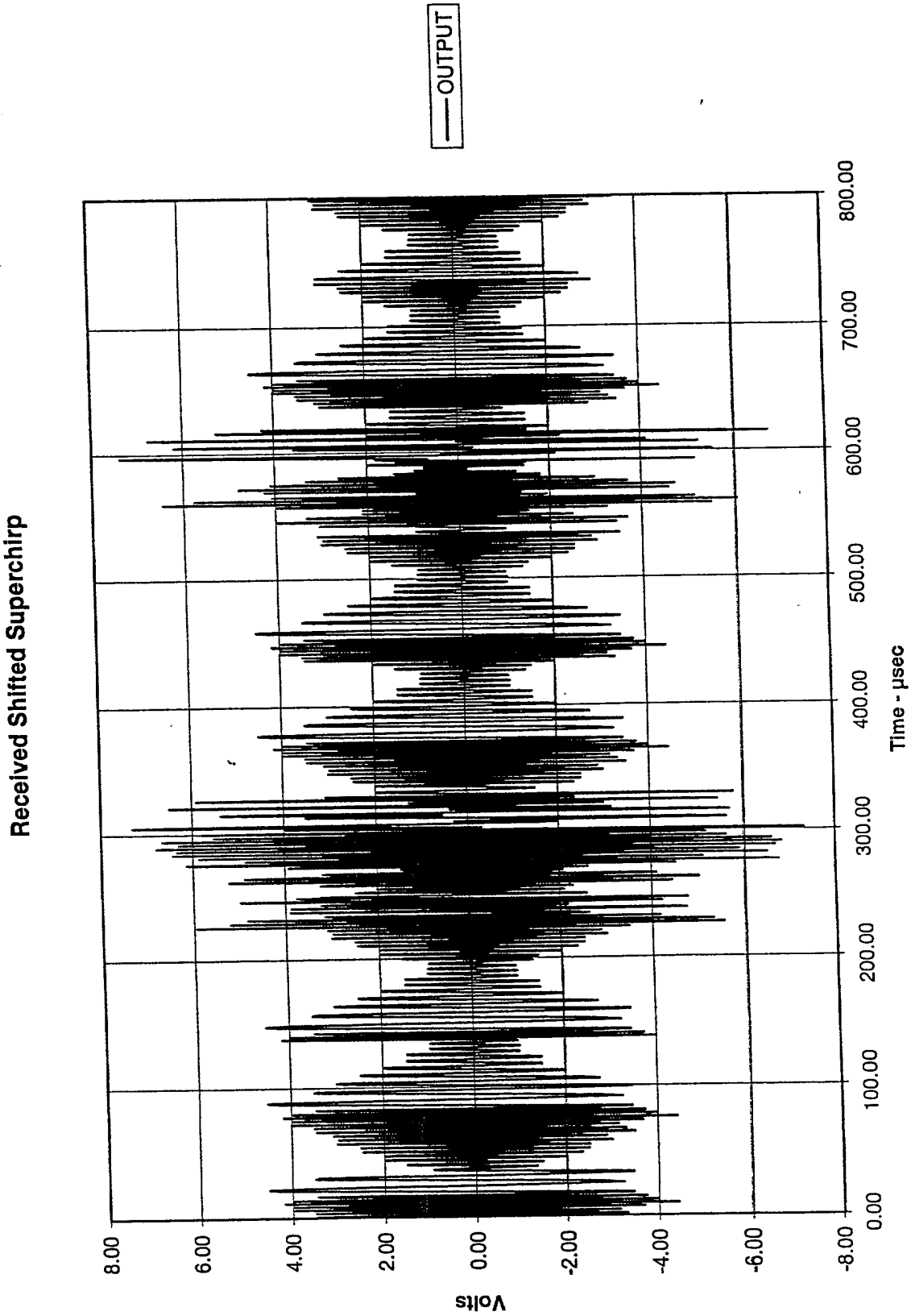

OUTPUT
Received Shifted Superchirp
Volts
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
-8.00
0.00
100.00
200.00
300.00
400.00
500.00
600.00
700.00
800.00
Time - µsec

Figure 8

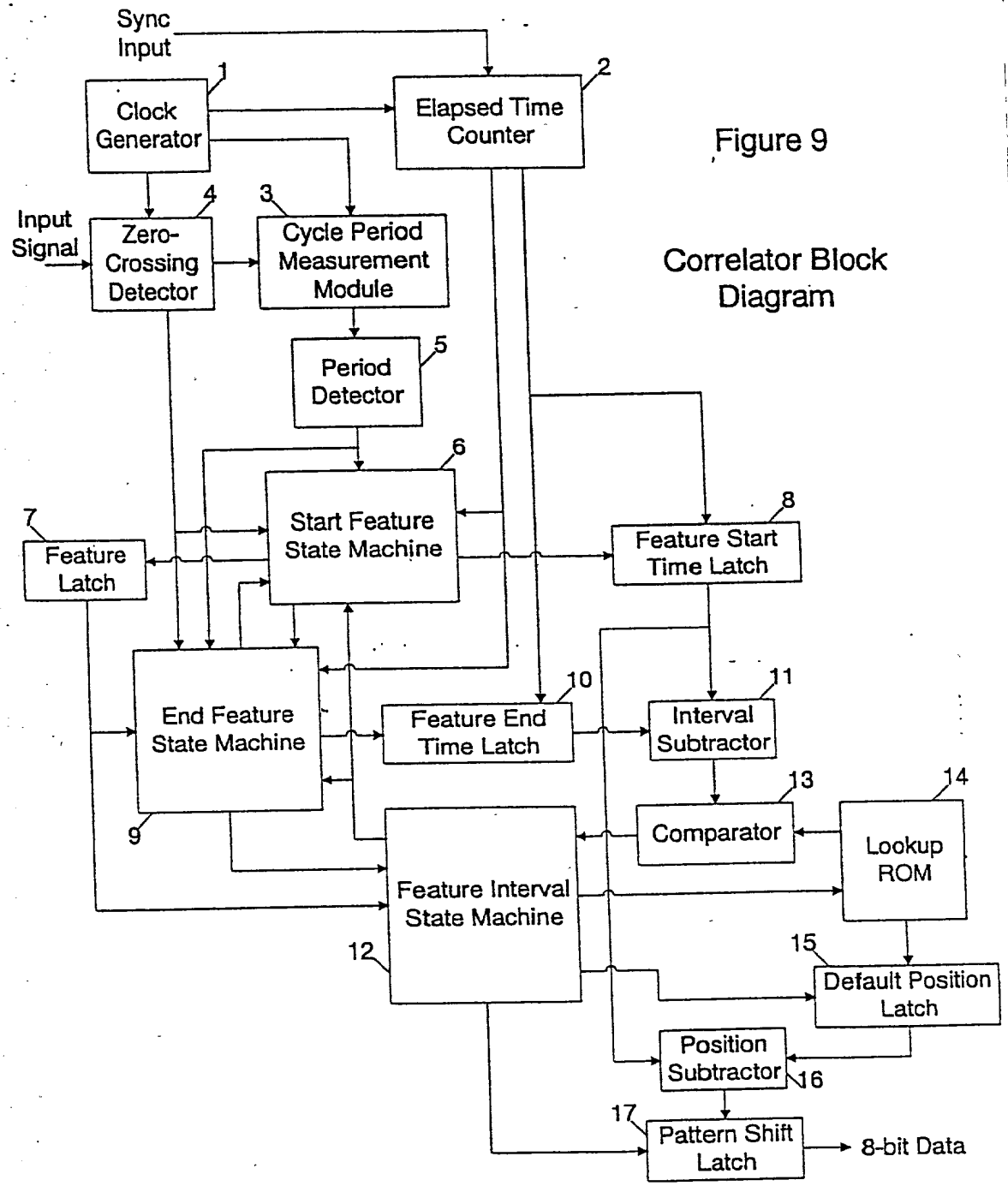


Figure 9

Correlator Block Diagram

Figure 10

Zero-Crossing Detector Block Diagram

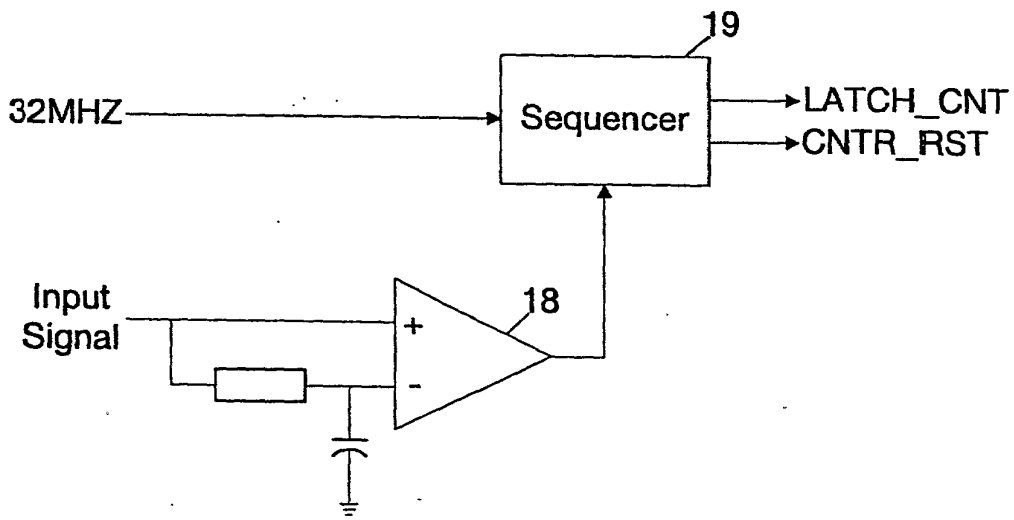


Figure 11

Cycle Period Measurement Module Block Diagram

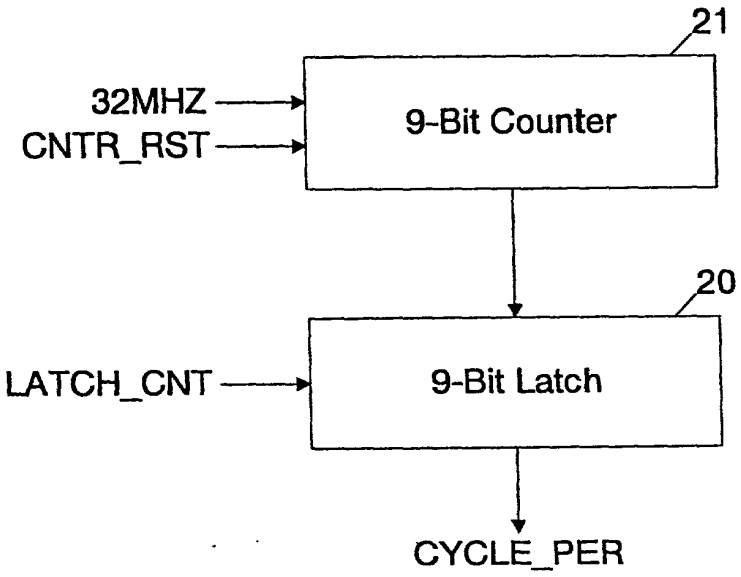


Figure 12

Elapsed Time Counter Block Diagram

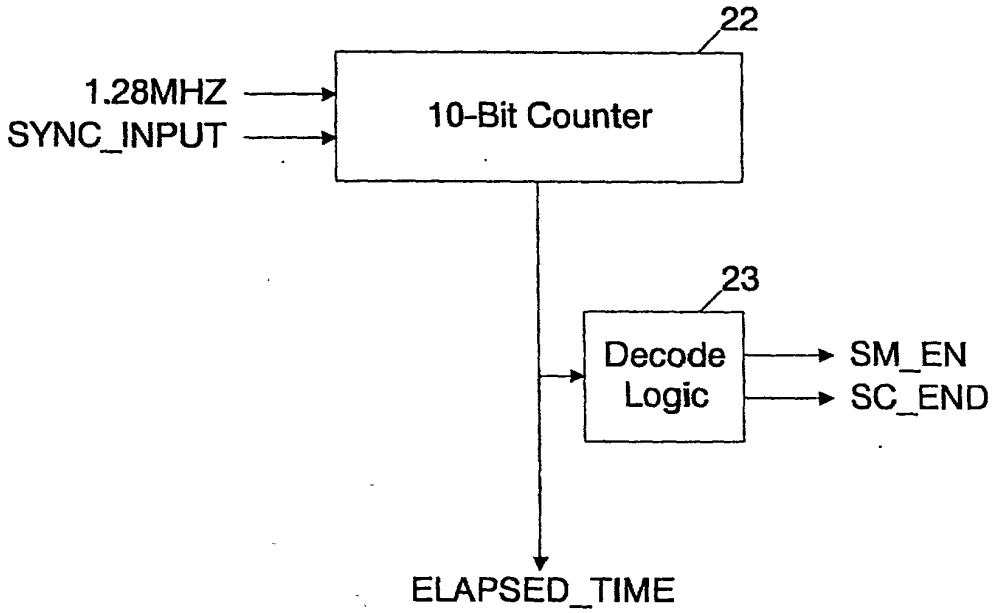
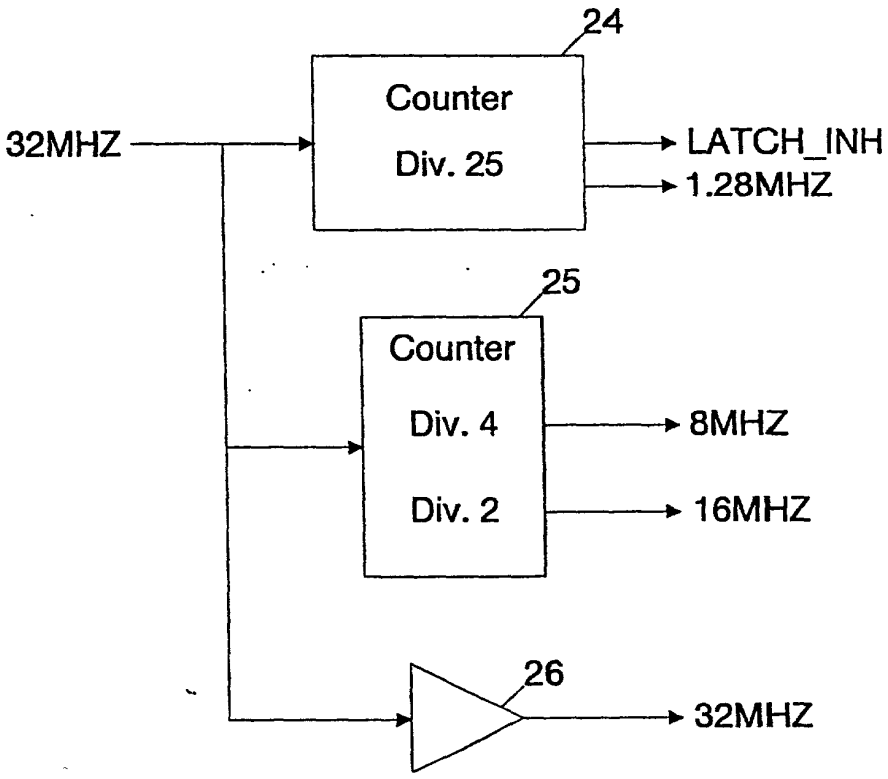


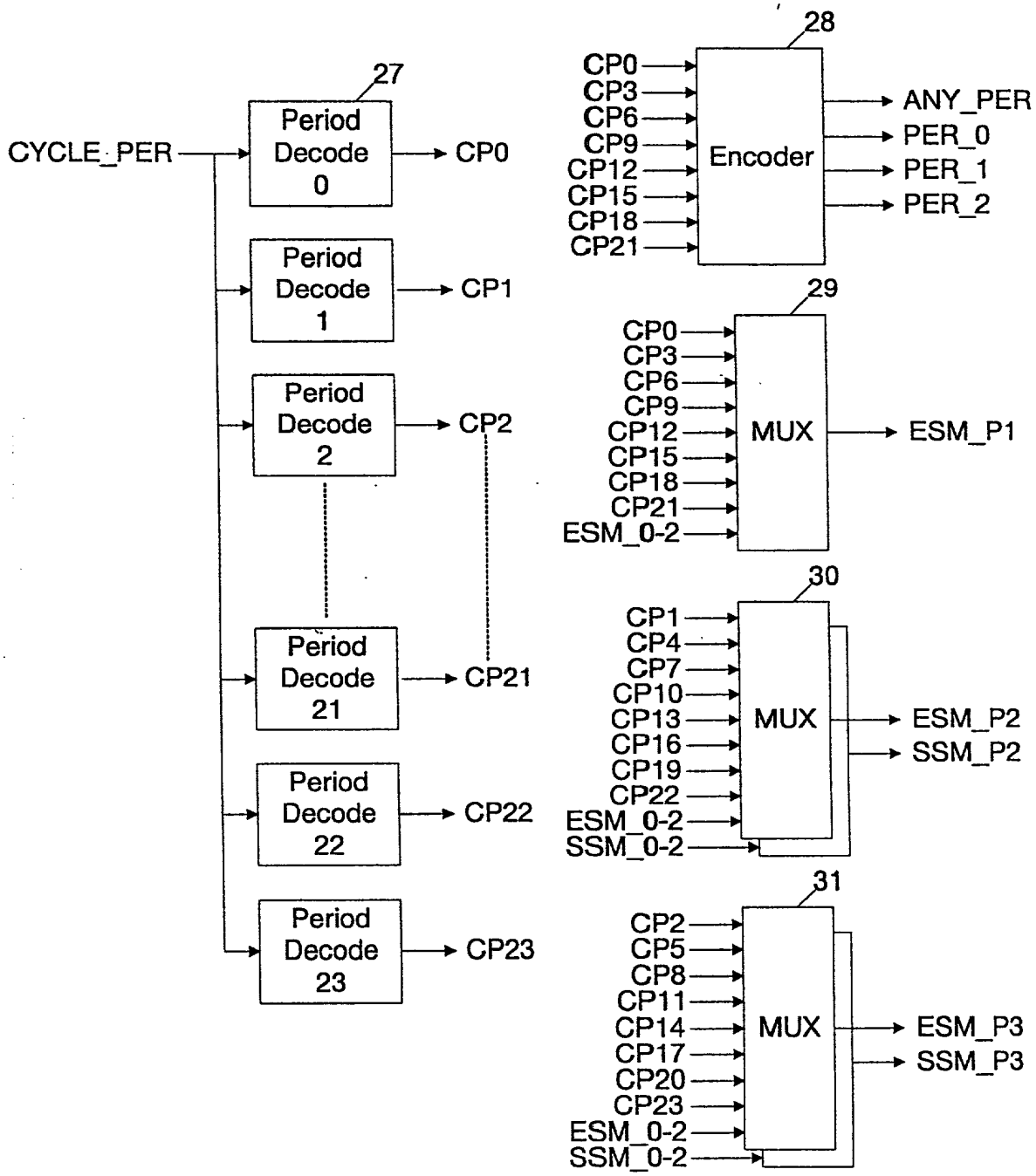
Figure 13

Clock Generator Block Diagram



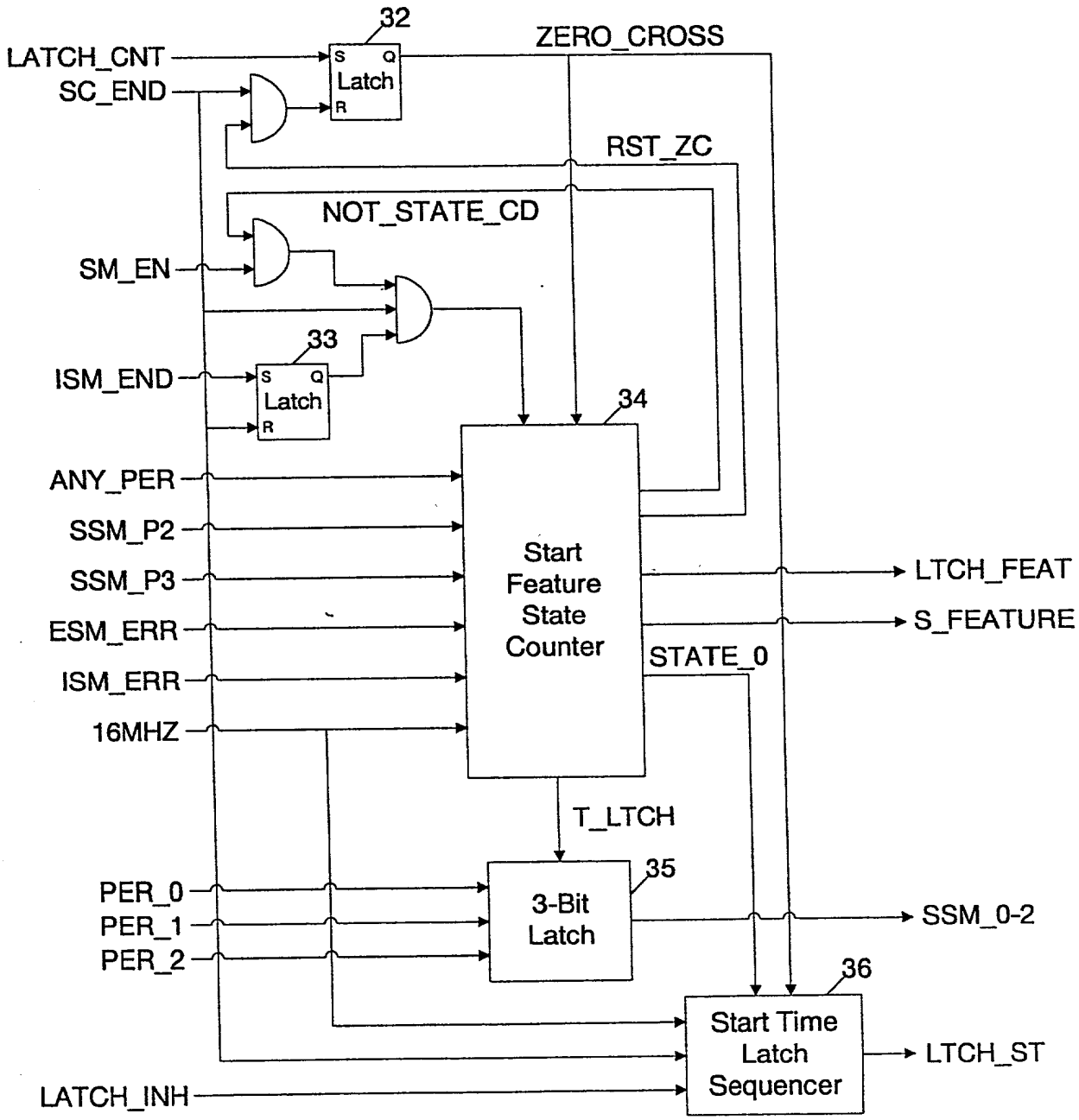
Period Detector Block Diagram

Figure 14



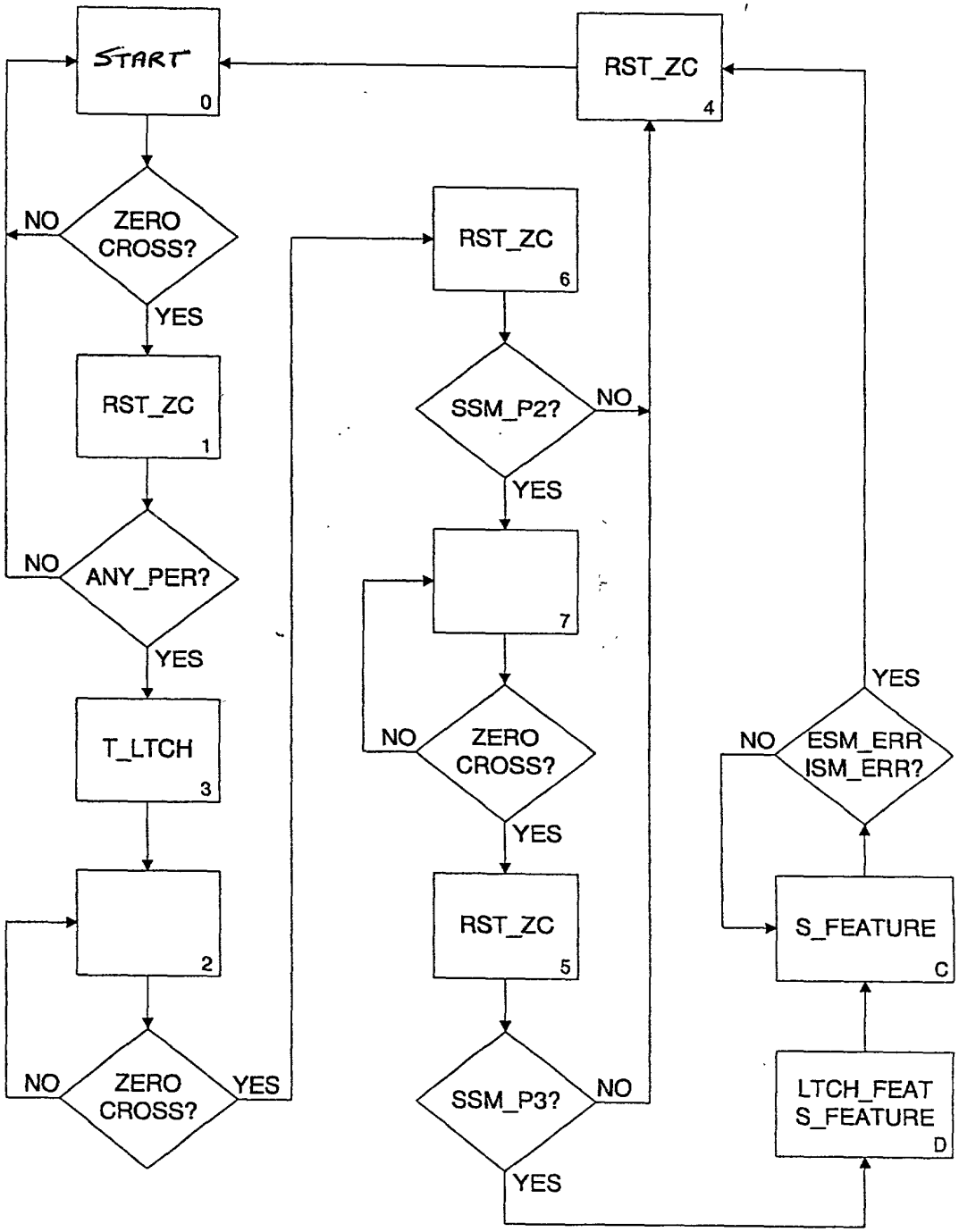
Start Feature State Machine Block Diagram

Figure 15



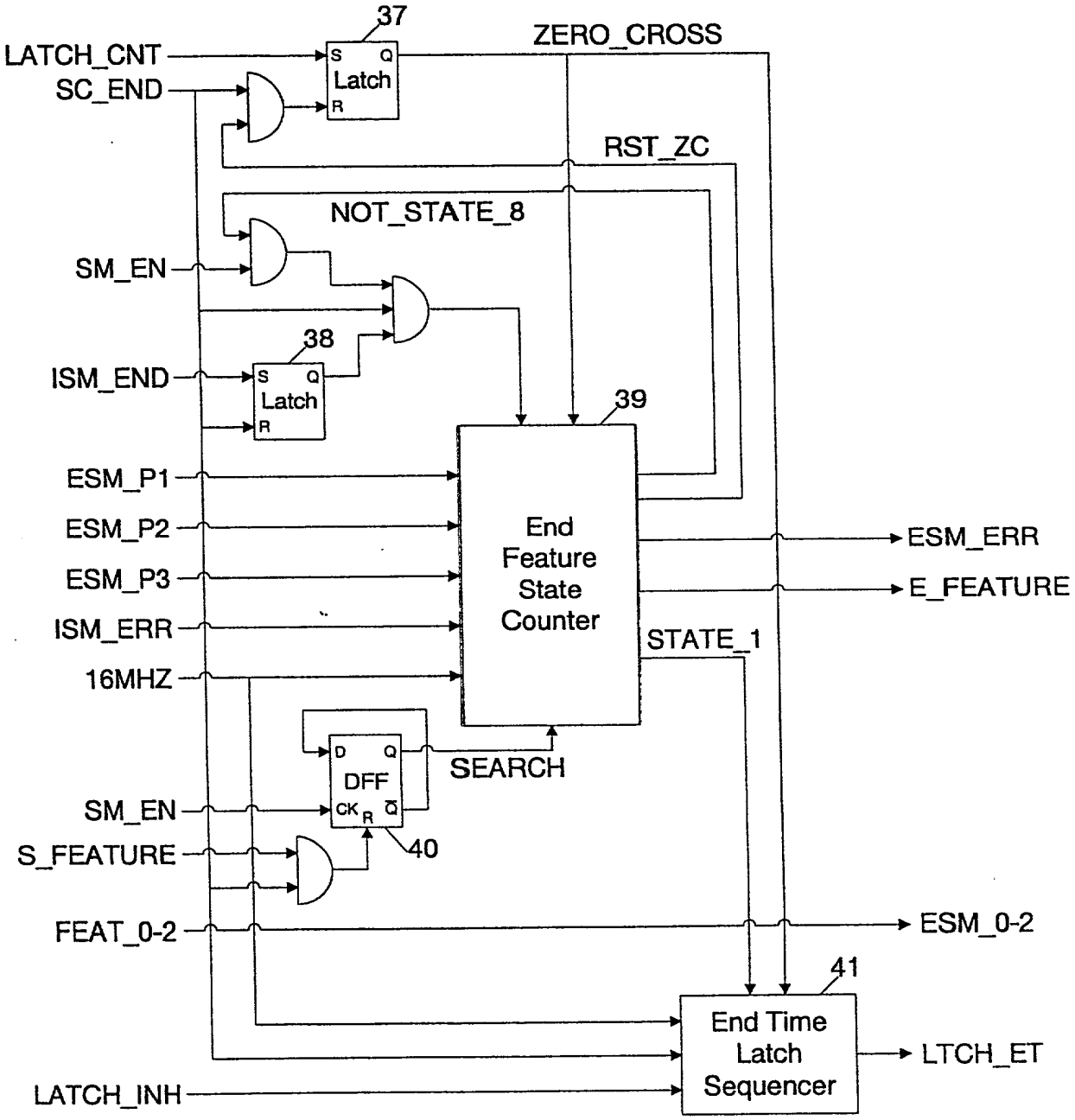
Start Feature State Machine State Diagram

Figure 16



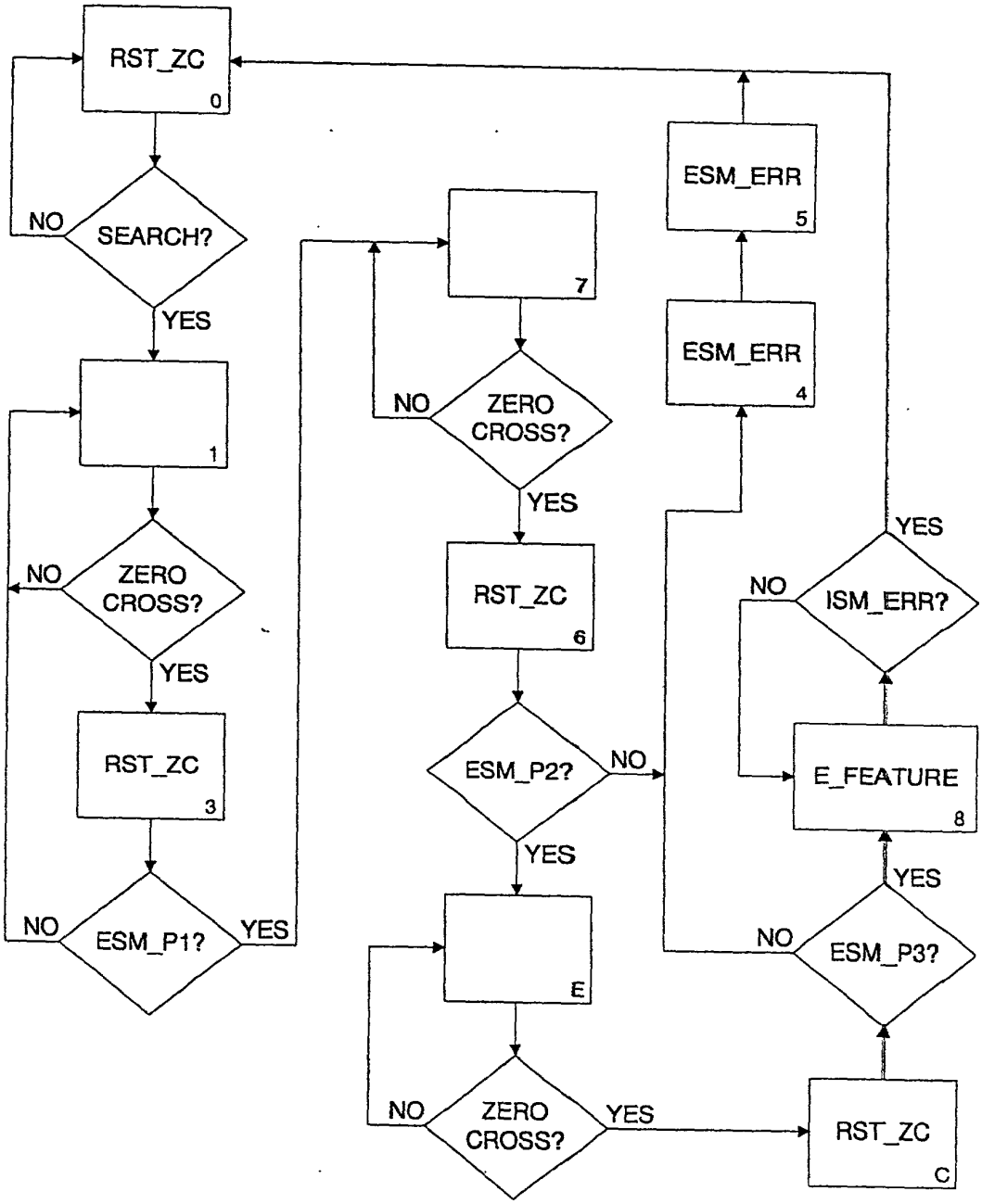
End Feature State Machine Block Diagram

Figure 17



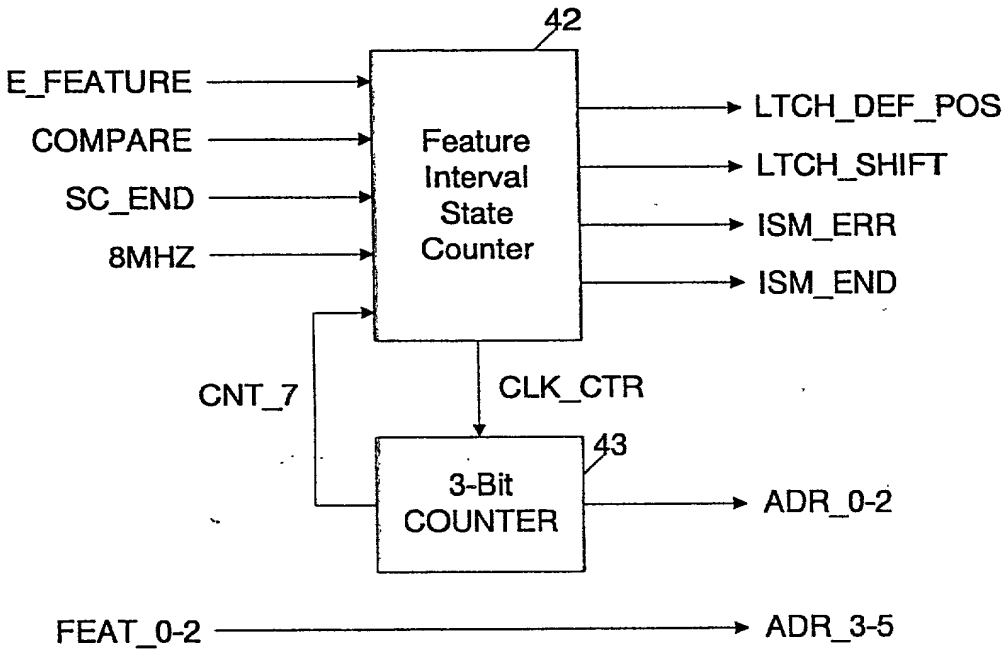
End Feature State Machine State Diagram

Figure 18



Feature Interval State Machine Block Diagram

Figure 19



Feature Interval State Machine State Diagram

Figure 20

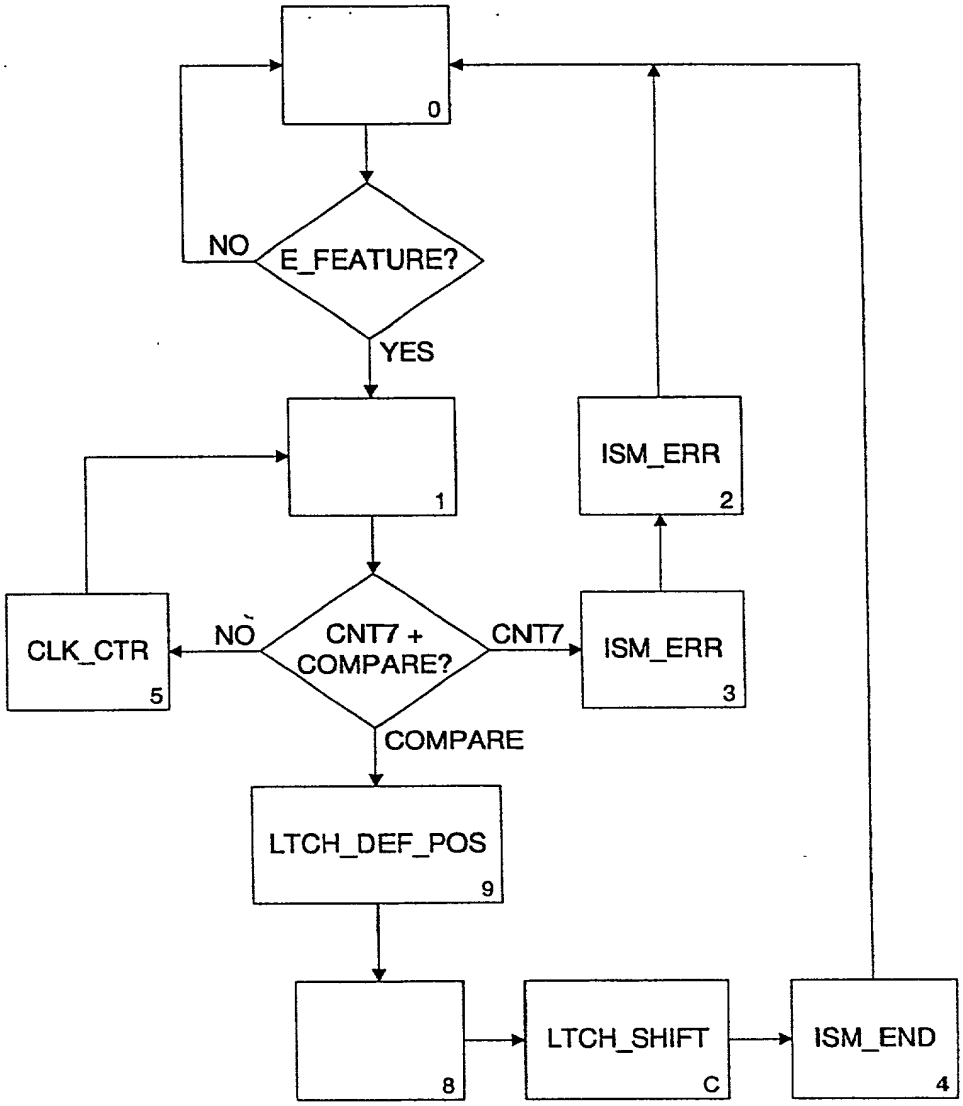
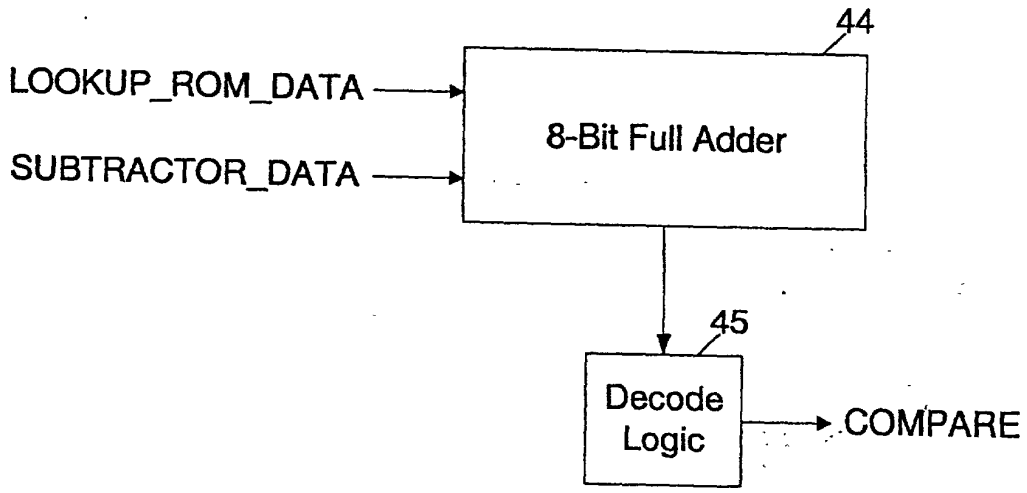


Figure 21

Comparator Block Diagram